

WHAT IS CLAIMED IS:

1. An information handling system, comprising;  
a printed circuit board having first and second  
cores, a dielectric including glass particles disposed in  
5 a portion thereof, the dielectric operable to couple the  
first and second cores substantially parallel one  
another;  
at least one processor operably coupled to the  
printed circuit board; and  
10 a memory operably coupled to the processor and the  
printed circuit board.
2. The information handling system of Claim 1,  
further comprising the dielectric including a fiberglass  
15 mesh.
3. The information handling system of Claim 1,  
further comprising portions of the first and second cores  
defining a printed circuit board power delivery plane.  
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4. The information handling system of Claim 3,  
further comprising the glass particles disposed in the  
dielectric substantially between the power delivery plane  
defined by the first and second cores.  
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5. The information handling system of Claim 1,  
further comprising at least one signal routing trace  
disposed on one or more of the first and second cores.

6. The information handling system of Claim 1,  
further comprising:

a third core disposed substantially parallel to the  
first core; and

5 a dielectric disposed between the first core and the  
third core, the dielectric having at least one region  
including glass particles disposed between a power  
delivery plane defined by the first core and the third  
core.

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7. The information handling system of Claim 6,  
further comprising a fourth core disposed substantially  
parallel to the second core.

8. A printed circuit board, comprising:  
a first core;  
a second core; and

an insulating material having regions of increased  
5 permittivity, the insulating material operable to couple  
the first core to the second core and the regions of  
increased permittivity disposed proximate at least one  
power plane defined between the first and second cores.

10 9. The printed circuit board of Claim 8, further  
comprising the insulating material including a fiberglass  
mesh foundation and an adhesive material disposed on  
respective sides of the foundation.

15 10. The printed circuit board of Claim 9, further  
comprising infusing the adhesive material with material  
having a higher permittivity than that of the adhesive  
material.

20 11. The printed circuit board of Claim 8, further  
comprising the increased permittivity regions of the  
insulating material defined by glass particles infused in  
the insulating material and in substantial alignment with  
the power plane defined by the first and second cores.

12. The printed circuit board of Claim 8, further comprising:

a third core; and

an additional insulating material having regions of  
5 increased permittivity, the additional insulating  
material operable to couple the first core to the third  
core and the regions of increased permittivity disposed  
proximate at least one power plane defined by the first  
core and the second core.

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13. The printed circuit board of Claim 8, further comprising:

at least two power planes defined between respective  
cores; and

15 at least two regions of increased permittivity  
disposed substantially within respective power planes,  
the two regions of increased permittivity having  
differing capacitance values.

14. A method for manufacturing a printed circuit board having at least a first and a second cores, comprising:

integrating an insulating material having a first  
5 permittivity into at least a portion of a dielectric layer having a second permittivity; and

coupling the first and second cores together about the dielectric layer such that the insulating material integrated portions of the dielectric layer substantially  
10 align with a power delivery plane defined by at least a portion of the first and second cores.

15 15. The method of Claim 14, further comprising integrating glass particles into at least a portion of the dielectric layer.

16. The method of Claim 14, further comprising integrating glass particles into at least a portion of the dielectric layer, the dielectric layer including a  
20 fiberglass mesh having an adhesive layer disposed on respective first and second sides, the glass particles infused into the adhesive layer of at least a first side.

17. The method of Claim 14, further comprising  
25 coupling a third core proximate the first core with a dielectric layer, the dielectric layer having glass particles disposed therein.

18. The method of Claim 14, further comprising reprocessing the dielectric layer to permit addition of an increased permittivity insulating material therein.

5        19. The method of Claim 14, further comprising maintaining portions of the dielectric layer substantially free from insulating material where such areas substantially align with signal pathways of a selected core.

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20. The method of Claim 14, further comprising coupling a first and second panel together about the dielectric layer such that the insulating material integrated portions of the dielectric layer substantially align with a power delivery plane to be defined by at least a portion of the first and second panels.

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